



NTSB National Transportation Safety Board

Office of Aviation Safety

Crash during Approach

Colgan Air, Inc. Flight 3407
Bombardier Dash 8-Q400
Clarence Center, New York
February 12, 2009

History of Flight

- First two flights of the day cancelled
- Departed Newark at 9:18 pm
- Captain was the pilot flying
- De-ice systems were on
- Approach speeds for Buffalo were 118 and 114 knots
- Flight crew discussed build-up of ice
- Cleared to 2300 feet

History of Flight

- Power pulled back to near flight idle
- Altitude hold mode was active and airspeed slowed down
- Torque is at minimum thrust
- Pitch increased
- Landing gear is lowered
- Flaps moved from 5 to 10 degrees
- Stick shaker activated and autopilot disengaged

History of Flight

- Torque increased and control column moved aft
- Airplane pitched up and rolled left, then right
- Stick pusher activated
- Flaps are retracted
- Speed continued to decrease
- More pitch and roll excursions
- Final descent

Weather at Buffalo

- Winds from 250 degrees at 14 knots
- Visibility 3 miles – light snow and mist
- Few clouds at 1100 feet
- Ceiling overcast at 2100 feet
- Temperature 1 degree C
- PIREPS – light to moderate rime icing

Animation Description

- Last two minutes of the accident flight
- Information from the FDR, CVR, radar data and aircraft performance data
- Does not depict weather or visibility nor include sound

HOT-2: gear's down.

HOT-1: flaps fifteen before landing checklist.

HOT-2: uhhh.



National Transportation Safety Board *Public Hearing*

22:16:27

130

knots

2280

feet

Shaker ON

Pusher OFF

Power

Condition

Flap



Heading 247°

Pedal



Auto Pilot

OFF

Gear DOWN

Rating

Max

0

5

10

15

Flight

Idle

Min

Max

0

5

10

15

20

Animation Description

- Starts at 22:14:24
- Airplane is at 2300 feet
- Airspeed is at 180 knots
- Low speed cue is in view
- Autopilot is on, landing gear is up and the flaps are retracted
- Level flight until stick shaker activates and autopilot goes off



Captain's Experience

- Private Pilot License – 1990
- Commercial Pilot License – 2002
- Hired by Colgan in September 2005
- ATP Ratings – Saab 340, Dash 8
- Dash 8 type rating – November 2008

Captain's Flight Time

- Total time – 3379 hours
- PIC – 1030 hours
- Dash 8 – 110 hours
- Last 90 days – 116 hours
- Last 30 days – 56 hours
- Last 7 days – 16 hours

First Officer's Experience

- Private pilot license – 2003
- Commercial pilot license – 2005
- Hired by Colgan in January 2008
- SIC privileges in Dash 8 – March 2008

First Officer's Flight Time

- Total time – 2244 hours
- Dash 8 – 774 hours
- Last 90 days – 163 hours
- Last 30 days – 57 hours
- Last 7 days – 15 hours

Flight Crew Disapprovals

- Captain
 - Private pilot instrument
 - Commercial pilot initial
 - Commercial multi-engine land
 - ATP Saab 340
- First Officer
 - Flight instructor initial

Remedial Training

- Notice N8900.71
 - Determine if operators have voluntarily accomplished SAFO 06015
- SAFO 06015
 - Review entire performance history
 - Provide additional training
 - Provide additional oversight

Commuting

- Captain
 - February 9 commuted to Newark from Tampa
 - February 10 began two day trip
- First Officer
 - February 11 started commute to Newark from Seattle
 - February 12 arrived in Newark

Geographic Distribution of Newark Based Pilots



Overnighting in Crew Room

- Colgan policy
 - Crew members could not use the crew room to overnight
 - Read and sign memo to that affect
- Flight crew
 - No evidence to date that either crew member had accommodations in Newark

Sterile Cockpit

- Colgan training
 - Covered during ground school
 - No formal documentation found
- Flight crew
 - Non-essential conversation for at least 3 minutes

Fatigue

- Colgan policy
 - Covered in basic indoctrination ground school
 - Operations Bulletin dated April 29, 2009
 - What causes fatigue
 - How to recognize fatigue and it affects performance
 - How to combat fatigue

Fatigue

- Flight crew
 - Captain
 - Seen sleeping in crew room
 - Logged onto CrewTrac at 3 am and 7:30 am on the day of the accident
 - First Officer
 - Commuted through the night
 - Multiple texts throughout the day

Staff

- Former Board Member Steven Chealander
- Lorenda Ward
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- Scott Dunham
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- Rochelle Hall
- Antion Downs
- Dan Bower
- Dennis Crider
- Jeff Marcus
- Aaron Dietz
- Mary Jane Smith

Parties

- Federal Aviation Administration
- Colgan Air, Inc.
- Air Line Pilots Association
- National Air Traffic Controller Association
- United Steelworkers Union (Flight Attendants)

Accredited Representative

- Transportation Safety Board – Canada
 - Transport Canada
 - Bombardier
 - Pratt and Whitney Canada
- Air Accidents Investigation Bureau - United Kingdom
 - Dowty Propellers



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